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For Your Interest

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For your Interest

special subjects

Roosting Flight Counts Tell Wood Duck Numbers

WILDLIFE researchers have found that fall roosting flight counts reveal the numbers of wood ducks along the Mississippi River in northeastern Iowa.

Flight counts made at approximately weekly intervals at 11 roosts indicate that fall roosting numbers build up steadily to a peak in the third week of September and decline rapidly after mid-October. The researchers noted a 40-percent decrease in wood duck numbers between 1959 and 1961, report A. O. Haugen and Dale Hein of Iowa State.

The possibility of using roosting flight counts now is being tested for determining spring populations of wood ducks.

Wood duck population tests are conducted in cooperation with the Iowa Conservation Commission, Bureau of Sport Fisheries, Wildlife Management Institute and the Department of Entomology and Wildlife at Iowa State.

Irradiated Mice Live 14 Generations

MICE IN laboratories at Iowa State have survived through 14 generations, living in an atmosphere of continuous radiation of 50 to 1,000 times the most acute dosages expected from atomic fallout.

The mice are vigorous, report John W. Gowen and Janice Stadler of the Experiment Station. Reproduction has been adequate to maintain the lines.

Litter numbers for males receiving no irradiation were comparable to those for males receiving dosages of up to 160 roentgens. With exposures of 320 roentgens, males only fertilized their earlier litters. Irradiated females showed early effects from 20 roentgens, and litter numbers were greatly reduced when females were exposed to 80 roentgens.

Exposure to 20 roentgens reduced the lifetime expectancy of females by 25-33 percent in comparison with females exposed only to spontaneous irradiation.

The researchers believe that understanding the long-term effects of low, but continuous, dosages of irradiation on domestic animals and ourselves will help us to cope with the problems introduced by nuclear-produced radiant energy of either industrial or wartime origin.

The animals are being tested for the effects produced by irradiation in terms of life span, fertility, viability of young, disease resistance and other factors.

grains

Moisture Has Key Effect on Stored Seed

MOISTURE CONTENT is the most important factor affecting the viability of stored seed, according to Don F. Grabe and Duane Isely of the Experiment Station. By lowering the moisture content of the seeds to 7 percent or below, seeds were stored successfully for 2 years at temperatures up to 80° F.

Moisture-proof metal cans were the only completely satisfactory containers for maintaining seed viability under all conditions tested.

None of the flexible packaging materials tested were satisfactory for storing seed under humid conditions. In terms of moisture resistance, the materials ranked in this order: polyethylene plastic, polyester plastic, paper-polyethylene laminate, cellophane, paper and cloth.

Irrigated Corn Outproduces Nonirrigated Corn in Iowa

A SUMMARY of 10 years of irrigation research in Iowa reveals that nonirrigated corn yields have averaged 102 bushels per acre, compared with an average of 137 bushels for irrigated corn.

In corn irrigation tests in 1961, maximum yields of 147 bushels per acre were obtained with a stand of about 18,000 stalks per acre and a nitrogen treatment of 120 pounds per acre. Very high fertility rates and plant stands of 40,000 stalks per acre in varying row widths produced yields about

A litter of mice whose parents and ancestors for the preceding 10 generations lived in an atmosphere of "constant" high energy irradiation.

the same as the plots with 18,000 stalks and 120 pounds of nitrogen per acre.

W. D. Shrader, C. E. Beer, Howard Johnson, Roland Schwanke and Lloyd Frederick are conducting the irrigation investigations.

Seek Corn Lines That Resist Rootworms

EXPERIMENT STATION and USDA entomologists at Iowa State are seeking possible sources of corn hybrids that are resistant to rootworms. Preliminary tests indicate a differential response to rootworm attack among 56 corn inbreds tested. Differences in the total number of crown roots and root-bearing nodes were noted among the inbred lines.

Don C. Peters and F. F. Dicke say that these findings are useful for identifying rootworm-resistant lines of corn. The researchers believe that rootworm-resistant lines of corn will be in great demand in Iowa if rootworms in this state become as resistant to insecticides as the western corn rootworm has in much of Nebraska.

horticulture

Release Pink-Root Resistant Onions

THE RELEASE of Ia 2997 — an inbred onion resistant to pink root —should make it possible to produce hybrid onions that have a high degree of resistance to the pink-root organism, say Jack L. Weigle and James C. Horton of the Experiment Station. The onion inbred Ia 1718 also has been released to the seed trade.

Iowa State researchers have developed a screening technique which they believe will speed the collection of more accurate information on the resistance levels of onion lines to the pink-root disease.

Greenhouse tests indicate that soil moisture may be an important factor in determining the time of pink-root infection in the field. Aeration of the soil or sand seems to reduce the effect of temperature on the start and development of pink root.

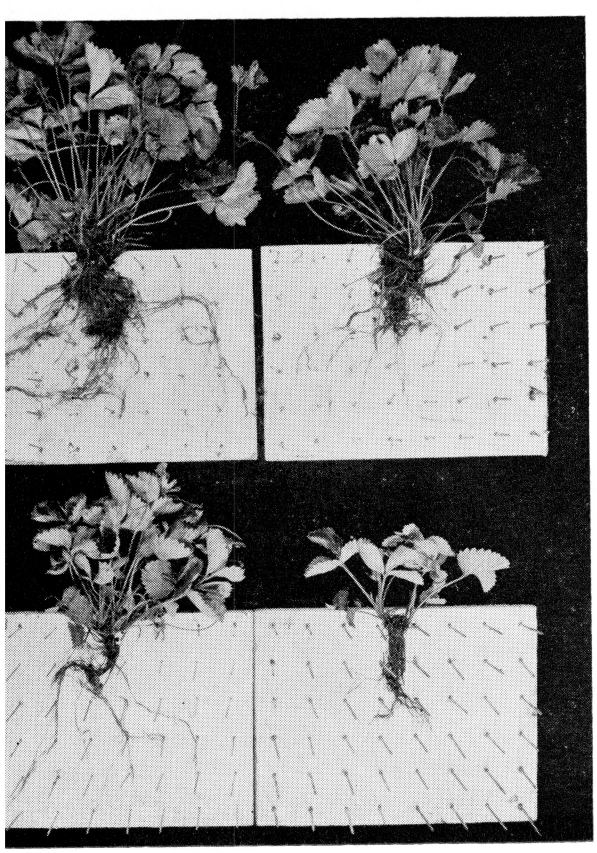
Plans call for continuing the onion breeding trials. Selected hybrids are being evaluated for their adaptation to cool peat soils of northern Iowa. The use of recurrent selection and synthetic varieties are being investigated as possible onion breeding methods. Additional lines are being screened for resistance to pink-root disease.

Cyclone Yields High At Council Bluffs

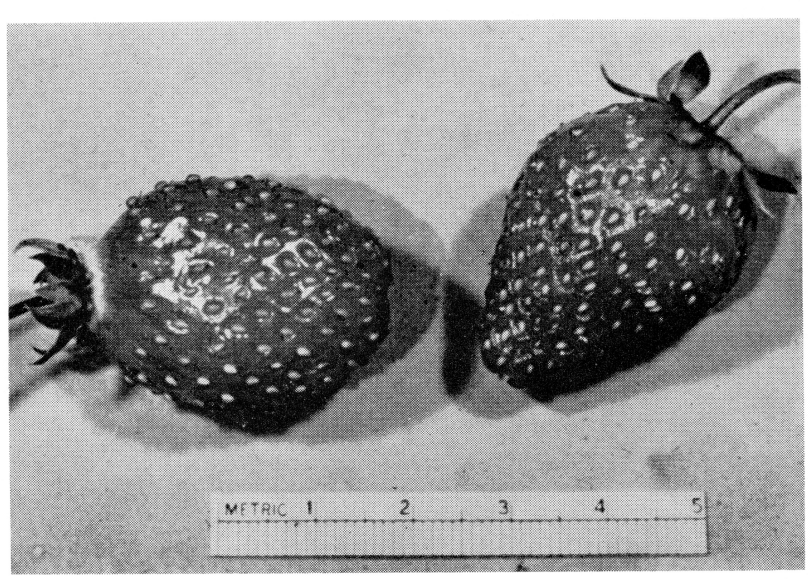
THE SIX HIGHEST yielding varieties of strawberries at Council Bluffs in 1961 were Cyclone, Erie, Sparkle, 2-37, Trumpeter and Surecrop. The six high varieties at Ames were 2-37, 106-5208, Erie, Midway, Trumpeter and Cyclone. Ozark Beauty, Ogallala and Lee Teague were the highest-producing everbearers in the Experiment Station tests.

In other cultural tests, summer planting of strawberries didn't look promising as a technique for commercial production in the Midwest.

E. L. Denisen is in charge of the small fruits breeding and cultural studies, with Roger A. Macha assisting. C. C. Doll is in charge of the Council Bluffs tests.



LEFT: Influence of date of planting on root development of summer planted Armore strawberries. Dates planted: Upper left, July 7; upper right, July 28; lower left, Aug. 18; lower right, Sept. 8. Plants were dug and photographed the following July after planting.



Ozark Beauty (left) and Ogallala (right) along with Lee Teague were highest-producing everbearers in Experiment Station tests.